



Presentation to the Administration and Regulations Joint Appropriations Subcommittee
February 7, 2012

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In support of Senate File 2088 and now Chapter 8A.201 of the Code of Iowa, this is a status report of information technology consolidation.

Background

State agencies have tremendous expertise in all technical areas that can be leveraged to create a single technical support structure. Information Technology (IT) in government has evolved into many silos of excellence throughout the state. Our vision is to combine, re-architect and focus this excellence into one seamless IT model that leverages shared resources to serve government and citizens alike.

Our *mission* is to provide unified, comprehensive, value driven IT services to Iowans with the *goal* of increasing the efficiency and value of these services. .

The scope of action encompasses human resource planning, financial accountability, project management, performance metrics, vendor management, customer engagement, IT governance and transforming state technology roles.

Expected *results* are to effectively manage and leverage technology investments for the State of Iowa to capitalize on IT best practices, purchasing, contracting, service provisioning and business processes in meeting State agencies missions. Such as:

- ✓ Data Security – Expanded capabilities
 - Integrated disaster recovery to meet agencies and state-wide business needs and priorities
 - Consistency with state-wide policies and processes to secure and protect assets and sensitive information to support data privacy and information security
 - Cyber security management and state-wide oversight with fewer points of entry
 - Greater opportunities for interconnectivity - share data seamlessly across departmental lines where necessary
- ✓ Efficiencies
 - Remove network and server architecture complexities
 - Data Sharing
 - Enterprise Applications – remove duplication
 - Efficient use of expensive data center space
 - “Green” efficiencies with reduced power generation and carbon emissions

- ✓ Leverage IT personnel resources
 - Increased technical expertise and cross training – decreased training costs as a result of IT solution standardization
 - Realignment of IT workload to address succession planning issues facing our aged IT workforce
- ✓ Reduced IT expenditures = cost savings
 - Minimize hardware and software duplications
 - Leverage volume purchasing
 - Fewer hardware and software maintenance agreements
 - Enhance efficiencies by controlling costs in removing underutilized equipment or increase usage

Expected *Outcome*: Increased data security, service delivery improvements, optimize IT resources and reduce costs.

Governance

The Department of Administrative Services and the Information Technology Enterprise provides comprehensive leadership and management for support of governmental operations.

One of the responsibilities is to adopt enterprise level information technology standards applicable to all Executive Branch agencies. The standards development process currently in use ensures enterprise operational standards are aligned with current technology and best practices. Enterprise operational standards guide agency operating policies. Information security standards provide a level of security that is consistently applied across agencies.

2011 Enterprise Information Technology Standards Approvals

Standard Identifier	Technology	Description	Effective Date
S-001-002	Desktop, Laptop, Netbook, and Tablet PC Purchasing	To establish requirements for participating agencies, except for those agencies exempted under Iowa Code 8A.201 (4), to purchase desktops, laptops, netbooks, and tablet PCs via the current Western States Contracting Alliance (WSCA) contract amendments.	August 23, 2011
S-009-001	Web Page Policy Notices	To establish standards for the following types of policy notices for agency web pages: privacy, terms of use, non-discrimination and accommodation, and accessibility.	December 12, 2011
S-009-002	Web Content Management System	To establish requirements for participating agencies, except for those agencies exempted under Iowa Code 8A.201 (4), to use a common website content management system.	December 12, 2011
S-012-005	Removable Storage Encryption	To establish minimum requirements for secure use of removable storage devices.	June 22, 2011

Standard Identifier	Technology	Description	Effective Date
S-012-007	Interconnectivity	To provide the minimum requirements to establish, maintain, and terminate interconnections with the shared state IT infrastructure or to IT systems outside state government.	June 22, 2011
S-012-009	Mobile Device Security	To establish the minimum requirements for secure use of mobile devices, such as the BlackBerry, iPhone, and other smartphones.	November 1, 2011
S-012-012	Email Security	To establish the minimum requirements for securing information sent via email.	December 14, 2011
S-012-013	Telework Security	To establish the minimum security requirements for teleworking by state employees, contractors, volunteers, and interns.	December 14, 2011

Types of IT Consolidated Services

The merging of government IT services and infrastructure while managing and resourcing the large portfolio of agency IT services includes:

- Information technology services, such as:
 - Groupware applications used to facilitate collaboration, communication and workflow, including electronic mail, directory services, calendaring and scheduling, and imaging systems.
 - Applications integration

ITE Web & Licensing Portals	E-Mail/Messaging	ITE ePayment Services	ITE Enterprise Authentication and Authorization (A&A)
<ul style="list-style-type: none"> • Iowa.gov Website Standardization ✓ 508 Compliance ✓ Design (common view) ✓ Mobile Applications ✓ Licensing Applications 	<ul style="list-style-type: none"> • 80% of the agencies have migrated • Email box rate lowered as volume of users increases ✓ Meet open records requirements ✓ Data security with encryption ✓ Disaster recovery capabilities Checkpoint on service level and price: Request for Information released 	<ul style="list-style-type: none"> • Transactions (credit card or e-check) ✓ 370,000/annual 	<ul style="list-style-type: none"> • 278,000 accounts (state and citizens) • 150,000 government applications using the service

- Infrastructure services, such as:
 - Data Centers
 - Servers, mainframes or other centralized processing systems
 - Storage systems, including but not limited to disk, tape, optical and other structured repositories for storing digital information
 - Network services supporting local area network, campus area networks, wide area networks and metro area networks
 - Information technology help desks
 - Cyber security functions and equipment
 - Digital printing and printing procurement services
 - Disaster recovery technology and services
 - Desktop support

Servers, Data Storage, Networks	Mainframe Services	ITE Web Hosting	ITE Printing
<ul style="list-style-type: none"> Servers <ul style="list-style-type: none"> ✓ 496 DAS supported servers ✓ 70 servers recently decommissioned and services now provided by DAS ✓ 1,162 servers remaining to consolidate Data Storage <ul style="list-style-type: none"> ✓ 115 TB DAS supported ✓ 38 separate systems to consolidate Networks <ul style="list-style-type: none"> ✓ 157 Gb per day network traffic ✓ 380+ server farm network ports 	<ul style="list-style-type: none"> ITE: 842,719 per month electronic transfer of warrants ITE: 909,000,000 annual production on-line transactions (CICS) ITE: 273,500,000 annual production on-line IDMS (data base) transactions i DAS mainframes: 480 MIPS Stated SLA 99% Availability Actual Availability 100% 	<ul style="list-style-type: none"> 300 - Websites 40M -Page Views/Month Top Five Websites <ul style="list-style-type: none"> ✓ Iowa Courts ✓ Iowa Sex Offender ✓ Iowa Dept. of Revenue ✓ Dept. of Natural Resources ✓ Iowa Governor's Office Stated SLA 99% Availability Actual Availability 99.82% 	<ul style="list-style-type: none"> 6.9M printed pages/month Printed Warrants <ul style="list-style-type: none"> ✓ 1,161,277 per month Stated SLA 95% OT Delivery Actual OT Delivery 100% <p>Note: On Time (OT)</p>

ITE - Helpdesk	Information Security Office	ITE – Web Hosting	ITE – Printing
<ul style="list-style-type: none"> 41,000 annual support requests 17,014 unique customers 20+ help desks in other agencies <p>Checkpoint on service level and price: Request for Information released</p>	<ul style="list-style-type: none"> 60 - Risk Assessments 15 – New IDS Appliances Deployed 90 – Vulnerability Tests 45 - Incident Responses Enterprise wide security training Annual Security compliance reporting – al agencies 1,621,124 daily inbound emails coming into the State network <ul style="list-style-type: none"> ✓ 94% blocked ✓ 2 quarantined ✓ 4% pass through the email filter 	<ul style="list-style-type: none"> 300 - Websites 40M -Page Views/Month Top Five Websites <ul style="list-style-type: none"> ✓ Iowa Courts ✓ Iowa Sex Offender ✓ Iowa Dept. of Revenue ✓ Dept. of Natural Resources ✓ Governor's Office Stated SLA 99% Availability Actual Availability 99.82% 	<ul style="list-style-type: none"> 6.9M printed pages/month Printed Warrants <ul style="list-style-type: none"> ✓ 1,161,277 per month Stated SLA 95% OT Delivery Actual OT Delivery 100% <p>Note: On Time (OT)</p>

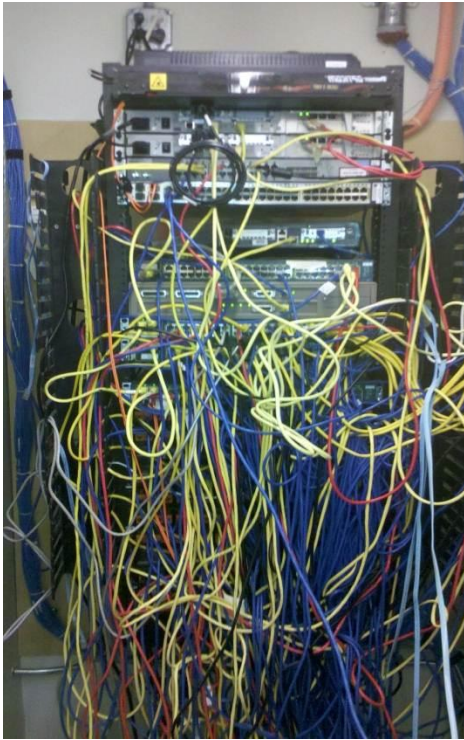
Phase Implementation Approach

Agency	Email	Desktop	Server Hostin	Network	Managed Print Services
Iowa Division of Banking (IDOB)	Complete				
Iowa Veterans Home (IVH)	In Progress				
Department of Revenue (IDR)	Complete	In Progress	In Progress	In Progress	In Progress
Department of Public Health (IDPH)	Complete			In Progress	
Department of Transportation (DOT)	In Progress				
Department of Human Services (DHS)	In Progress	In Progress	In Progress	In Progress	In Progress
Public Defender (SPD)					
Department of Public Safety (DPS)					
Department for the Blind (Blind)					
Iowa Prison Industries (IPI)	In Progress				
Fair Authority					
Iowa Public Television (IPTV)					
Alcoholic Beverages Division (ABD)	Complete				
Department of Administrative Services (DAS)	Complete	Complete	Complete	Complete	Complete
Department of Cultural Affairs (DCA)	Complete	Complete	Complete	Complete	In Progress
Iowa Economic Development Authority (IEDA)	Complete		In Progress		
Department of Elder Affairs (IDA)	Complete	In Progress	In Progress	In Progress	In Progress
Department of Human Rights (DHR)	Complete		Complete		In Progress
Department of Inspections and Appeals (DIA)	Complete	In Progress	In Progress	In Progress	In Progress
Department of Natural Resources (DNR)	Complete				In Progress
Iowa Agricultural Development Authority (IADA)	Complete		Complete		
Iowa Board of Dental Examiners (IBDE)	Complete				
Iowa Board of Medical Examiners (IBME)	Complete				
Iowa Board of Nursing (BON)	Complete				
Iowa Board of Parole (IBOP)	Complete				
Iowa Board of Pharmacy Examiners (IBPE)	Complete				
Iowa Civil Rights Commission (ICRC)	Complete	Complete	Complete	In Progress	In Progress
Iowa College Student Aid Commission (ICSAC)	Complete			Complete	
Iowa Communications Network (ICN)	Complete				
Iowa Department of Management (IDOM)	Complete	Complete	Complete	Complete	In Progress
Iowa Department of Veterans Affairs (IDVA)	Complete				
Iowa Ethics and Campaign Disclosure Board (IECDB)	Complete				
Iowa Governor's Office (IGOV)	Complete	Complete	Complete	Complete	In Progress
Iowa Law Enforcement Academy (ILEA)	Complete		In Progress		In Progress
Iowa Public Employment Relations Board (PERB)	Complete		In Progress	Complete	
Iowa Vocation Rehabilitation Services (IVRS)	Complete		In Progress	In Progress	In Progress
Office of Consumer Advocate (OCA)	Complete			Complete	
Office of Drug Control Policy (ODCP)	Complete	Complete	Complete	Complete	In Progress
Professional Licensing Division (PLD)	Complete	Complete	In Progress		
Treasurer of State (TOS)	Complete				
Iowa Workforce Development (IWD)	Complete				
Department of Public Defense (DPD)	Complete				
Homeland Security Management (HSEMD)	Complete				
Board of Educational Examiners (BOEE)	Complete				
Iowa Lottery (ILOT)	Complete				
Iowa Insurance Division (IID)	Complete				
Iowa Finance Authority (IFA)	Complete				
Department of Education (ED)	Complete				
Department of Corrections (DOC)	Complete				
Iowa Utilities Board (IUB)	Complete		In Progress	Complete	
Iowa Racing and Gaming Commission (IRGC)	Complete				
Iowa Credit Union Division (IACUDIV)	Complete	Complete	Complete	Complete	In Progress
Iowa Public Employment Retirement System (IPERS)	Complete				
State Library (LIB)	Waiver				

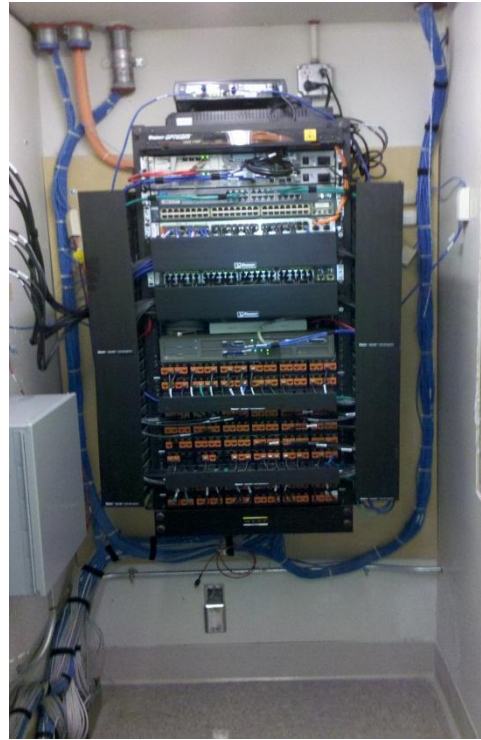
Before and After

Agencies receive a range of benefits from IT consolidation including the ability to refocus resources on value-driven business priorities instead of commodity IT service management. The following example details the results one agency recently experienced following IT consolidation. After a comprehensive review of all IT assets and business processes, DAS delivered a 17-point health-check and risk analysis to the agency, identifying 10 areas of poor or marginal compliance with State of Iowa Enterprise Security and Operational Standards. In joint working sessions, agency risks were prioritized and managed through a systematic migration process. The results, shown below, indicate the dramatic changes to the agency IT portfolio upon completion of the consolidation:

Before Consolidation (Agency Managed)	After Consolidation (DAS Managed)
No comprehensive technology spending plan. IT costs difficult to understand and budget.	Technology spending plan documented and presented to Director including lifecycle replacements for all key assets. Detailed monthly and annual cost plans for DAS services delivered to be used in budget exercises. Capital expenditures for redundant services eliminated and replaced with monthly fees for DAS shared services.
Ad hoc IT procurement.	Standardized IT procurement using established state contracts.
Software licensing managed in different locations within the agency. Low degree of confidence in licensing compliance.	Full inventory completed for all software deployed and licensed. Discounts received through statewide volume purchasing. Contract renewal calendar documented and on file with DAS.
Lack of full visibility into IT environment.	24-page inventory of all assets delivered to Agency Director. Inventory documented and managed through central system for audit and control purposes.
Business processes undocumented. Systems maintained on best effort basis using historical knowledge.	Business processes documented using formal business analysis techniques. Points of integration, data sharing, and business-user approvals recorded and updated as needed by DAS.
Uncertain compliance with Enterprise Security and Operational IT Standards.	Full compliance with all standards guaranteed.
Specialized products and services requiring unique IT knowledge and specialized skills.	Commoditized and standardized IT portfolio, simplifying management and reducing the number of IT staff hours required to support environment.
Disaster Recovery based on tapes carried offsite in shoe box.	Disaster Recovery automated with data located at DAS datacenters in Hoover Building and Joint Forces Headquarters in Johnston.
Reliance on generalist IT staff to provide commodity services at high per-unit costs.	Agency IT staff refocused on agency priorities. Trained DAS specialists provide support for commodity services managed in a standardized way.
No service availability guarantees.	Documented Service Level Agreements detailing service levels for all services delivered including: uptime, response time, capacity, and outage windows.



BEFORE



AFTER

Additional Actions – Checkpoint on service levels and price from an Enterprise perspective

Research is ongoing factor in the information technology field. We are continually seeking information and learning from others in how best to design and deliver technology solutions and to ensure we do this as cost conscious as possible.

Collaborations underway include a partnership with the State of Michigan to serve as a disaster recovery site for their application hosting server platforms. The same is being considered for Iowa to utilize Michigan's Executive Branch data center as a disaster recovery site for Iowa.

Several information technology services are growing rapidly and to ensure we can provision the best service solution, inquiries into the private sector are being sought through a request for information process. The current information technology services areas are:

- Call Center services
- Desktop Support and Asset Management services
- E-mail and related Messaging services

In addition, to build upon the means in which we support the migration of agency IT services and the ongoing supports, requests for information in the following areas are also being considered:

- Software and Hardware Asset Tracking System
- Project Management
- ITIL change management, incident reporting, trouble ticket systems
- Performance monitoring systems

Financial Summary

	FY11 Spending Results(1)	One Time Investment	Estimated Annual Savings or Cost Avoidance(2)	Actual Annual Savings or Cost Avoidance to Date(3)
State IT Personnel (771 FTE's)	\$72,402,000		\$7,240,200	\$807,500
Contracted Professional Services	\$27,184,042		\$0.00	\$0.00
Desktops	\$14,991,640		\$840,000	\$763,000(4)
Servers	\$21,005,141		\$600,000	\$238,000(5)
Networks	\$5,681,394		\$1,060,000	\$0.00
Printers/Printing	\$1,496,671		\$200,000	\$22,345(6)
Data Centers/Server Farms/Data Storage & Backup	(included in Servers)		\$1,900,000	\$27,000(7)
ICN Internet Services Provided to Agencies	\$15,171,386			Rate reductions recently announced
ITE Services Provided to Agencies	\$27,266,864			\$0.00
Totals	\$185,199,138	\$2,300,000	\$11,840,200	\$1,094,845 + 763,000 <u>\$1,857,845</u>

1. Data Source: FY'11 Executive Branch IT Equipment and Services Spending Results (as reported by agencies January 2012).
2. Data Source: Enterprise Infrastructure and Personnel Assessment (estimated are based on industry standards).
3. Seven (7) FTE's from six (6) agencies recently consolidated; 2.5 FTE's from email consolidations
4. Renegotiated computer hardware contracts a few years ago accompanied by a State of Iowa standard to acquire standard machines from selected vendors. Rebidding resulted in a lower annual cost for computer hardware based on three year life cycle refresh of just over \$763,000.
5. Annual savings of removing 70 agency servers through consolidation (hardware and software only)
6. Closing Grimes print facility and merging into Hoover space (lease space savings only)
7. Electrical power savings from virtualization.

Pre and Post Consolidation Estimated Financials

	Estimated Annual IT Related Budget Items Prior to Consolidation	Estimated NEW Annual DAS-ITE Services	Estimated Annual Savings
Cultural Affairs	\$170,000	\$18,000	\$152,000
Credit Union Division	\$104,833	\$14,400	\$90,433

Economies of Scale – Actual Reduction in Rates based on Email Consolidation

- Volume/usage increases and overall costs decrease
- Fewer devices are required in a consolidated State of Iowa

Price Sensitivity to Mailbox Volume

